

Amendments to the Claims:

The following is a complete list of claims, replacing all prior versions of the claims in the application:

1 **Claim 1 (currently amended):** A polymerizable composition comprising a mixture of an
2 optically clear dead polymer and polymer, a reactive plasticizer in an amount to render the
3 composition semi-solid and malleable, and, optionally, an initiator, the dead polymer and
4 reactive plasticizer exhibiting compatibility at temperatures not higher than 100°C, and wherein
5 the polymerizable composition is semi-solid and malleable and, when polymerized, remains
6 optically clear and exhibits less than about 5% low shrinkage.

1 **Claim 2 (currently amended):** A polymerizable composition comprising a mixture of i) a
2 dead polymer derived from monomers that cannot be polymerized in less than 10 minutes in a
3 mold under UV exposure and exposure, ii) a reactive plasticizer in an amount to render the
4 composition semi-solid and malleable, the reactive plasticizer having a refractive index that
5 closely matches the refractive index of the dead polymer and being capable of forming a
6 crosslinked network when polymerized, and iii) optionally, an initiator, the dead polymer and
7 reactive plasticizer exhibiting compatibility at temperatures not higher than 100°C; wherein the
8 polymerizable composition is capable of polymerizing in less than 10 minutes in a mold under
9 UV exposure, and wherein when polymerized the polymerizable composition exhibits an optical
10 clarity of at least 85% at 2 mm thickness, a refractive index of at least 1.5, a glass transition
11 temperature of at least 80°C, a modulus of elasticity greater than 10^9 dynes/cm², a Shore D
12 hardness greater than 80, and an Abbe number greater than 25.

1 **Claim 3 (original):** A polymerizable composition according to claim 2 which is impact-
2 resistant upon polymerization.

1 **Claim 4 (canceled)**

- 1 **Claim 5 (original):** A polymerizable composition according to claim 2 which exhibits
2 dimensional stability upon polymerization.
- 1 **Claim 6 (original):** A polymerizable composition according to claim 2 wherein the reactive
2 plasticizer is less than 50% by weight of the composition.
- 1 **Claim 7 (original):** A polymerizable composition according to claim 2 wherein the reactive
2 plasticizer is less than 25% by weight of the composition.
- 1 **Claim 8 (original):** A polymerizable composition according to claim 2 wherein the optically
2 clear dead polymer is selected from the group consisting of polystyrenes, polysulfones,
3 polyacrylates, polymethacrylates, polycarbonates, polyolefins, polyurethanes, copolymers and
4 block copolymers.
- 1 **Claim 9 (currently amended):** A polymerizable composition according to claim 2 wherein
2 the reactive plasticizer comprises reactive functional groups selected from the group consisting
3 of acrylate, methacrylate, acrylic anhydride, acrylamide, vinyl ether, vinyl ester, vinyl halide,
4 vinyl silane, vinyl siloxane, acrylated silicones, methacrylated (meth)acrylated silicones, vinyl
5 heterocycles, diene, allyl epoxies (with hardeners), allyl epoxies with hardeners, and urethanes.
- 1 **Claim 10 (new):** A polymerizable composition according to claim 1 further comprising an
2 initiator.
- 1 **Claim 11 (new):** A polymerizable composition according to claim 2 further comprising an
2 initiator.
- 1 **Claim 12 (new):** A polymerizable composition according to claim 2 wherein the optically
2 clear dead polymer is selected from the group consisting of methacrylates, polyolefins,
3 polystyrenes, and polycarbonates.

1 **Claim 13 (new):** A polymerizable composition according to claim 2 wherein the optically
2 clear dead polymer is selected from the group consisting of polyolefins.

1 **Claim 14 (new):** A polymerizable composition according to claim 2 wherein the reactive
2 plasticizer comprises functional groups selected from the group consisting of acrylate,
3 methacrylate, vinyl ether, and diene.

1 **Claim 15 (new):** A polymerizable composition according to claim 2 wherein the reactive
2 plasticizer comprises functional groups selected from the group consisting of methacrylate.